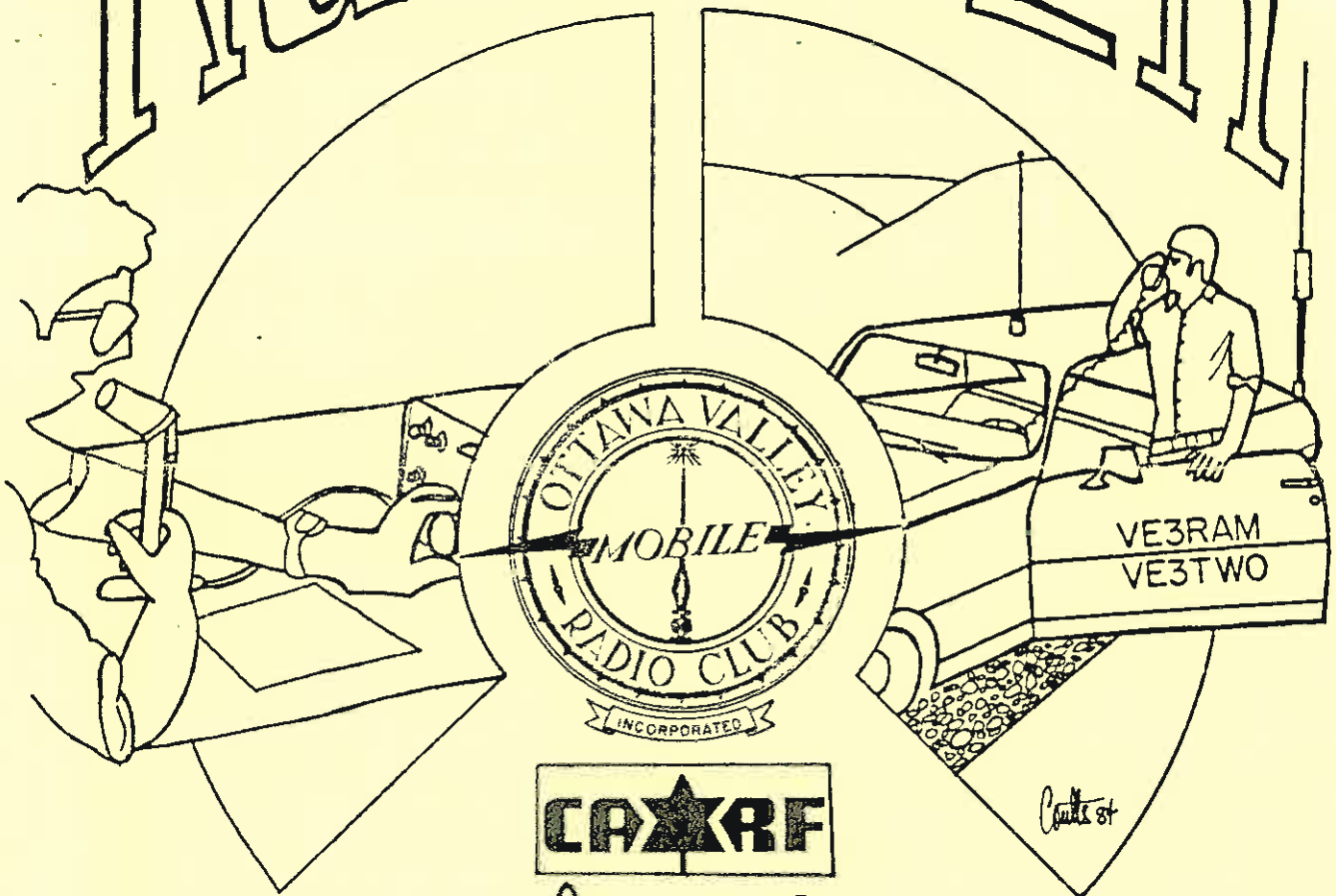


Volume 30 Dec. 1987
#1

RAMBLER



NEXT MEETING:

JAN 15, 1987

FRED GREEN WILL PRESENT "ELECTRIC CARS"

THE OTTAWA VALLEY MOBILE RADIO CLUB INCORPORATED

1986-1987 EXECUTIVE

| | | | |
|-------------------|---------------|--------|----------|
| PRESIDENT | Vance Johnson | VE3OAO | 824-9555 |
| VICE PRESIDENT | Bill Seyler | VE3OAI | 836-5818 |
| SECRETARY | Kris Anderson | VE3OWE | 225-4152 |
| TECHNICAL ADVISOR | Alan Boyce | VE3LNN | 737-4937 |
| PUBLIC RELATIONS | Bob Brown | VE3JDB | 729-6440 |
| TREASURER | Bob Hicks | VE3OSN | 745-9392 |
| PAST PRESIDENT | Bob Campbell | VE3KLK | 729-7536 |
| EDITOR | Jerry Wells | VE3CDS | 225-7374 |
| MEMBERSHIP | Pat Brewer | VE3KJQ | 820-9309 |

CLUB SPONSORED ACTIVITIES

POT HOLE NET - OVMRC Net - Every Sunday, 1000 local time on 3760 kHz. SSB. All radio amateurs are welcome to participate.

THE WISE OWL NET - OVMRC Net - Ragchew net every Friday evening at 2000 local time on the club repeater VE3TWO - 147.30/90 MHz.

VE3JW - Amateur radio station of the National Museum Of Science and Technology. The OVMRC helps maintain the station and schedules operators for the station as part of an Amateur Radio public relations display. VE3JW operates on all HF Bands, both CW and phone. Slow scan TV is also demonstrated. For information or if you wish to operate the station, contact the Public Relations Coordinator.

LOCAL AMATEUR RADIO ACTIVITIES

POT LID NET - Sponsored by Ed, VE3GX. An informal slow speed CW net meeting each Sunday (except July and August) at 1100 hrs on 3620 kHz, to provide and stimulate interest and proficiency in CW procedures.

CAPITOL CITY FM NET - Sponsored by the Ottawa Amateur Radio Club Inc. every Monday evening at 2000 hrs local time. Conducted on VE2CRA repeater 146.94/146.34.

SWAP NET - Sponsored and conducted by Ed, VE3GX, each Sunday as part of the Pot Hole Net and each Monday as part of the Capitol City FM Net (except July and August). Ed may be reached at 733-1721 for listings and queries.

THE MILITARY NET - Sponsored and conducted by Frank, VE3MSC, Tuesday at 2000 hrs on VE3TWO 147.30/147.90 MHz.

Membership in the OVMRC is open to all those interested in Amateur Radio. Regular meetings are held on the third Thursday of each month (except July and August) at 2000 hrs unless otherwise posted. Meetings normally take place in the auditorium of the Museum of Technology on St. Laurent Blvd (south of the Queensway)

The OVMRC provides code practice 24 hours a day. Dial 825-0786.

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QUA VE30AO
 Ontario
 Amateur
 Owl

CQ to OVMRC members...

Welcome to the Rambler
 Volume 30, Number 1.

Our meeting will be
 before the middle of the
 month on the 15th. We'll
 have Fred Green VE3IO
 to present
 "Electric Cars."

February 21, 1987, we will
 have our Annual Dinner
 at the Dubrovnik or the
 Sergeant's Pump.

Now that all the important news
 has been said, I'll switch to a
 smaller type font. the software
 responsible for the owls and
 the variable type fonts is "the
 Newsroom".

It has been very encouraging to
 hear how well our present radio
 school class is doing. Jim
 Johnson has already gotten his
 licence and is VE3GLJ (good
 looking Jim) Congratulations
 are also in order to the
 students who may have passed
 the code tests already. very
 good.

this isn't the usual spacing,
 I'm making it double spaced for
 ease of reading.

Before starting this article, I
 did some research on Ostriches,
 Orioles and Owls.

scientists have
 identified about
 525 various kinds
 of owls. The owl
 has long been a
 symbol of wisdom.
 Actually, geese, crows and
 ravens are smarter than owls.
 the owl above could represent
 any owl, but the one at the top
 left is a barn owl and the one
 at the bottom is a saw whet
 owl.
 The above wisdom came from vol.
 14 of the world book
 encyclopedia.



Since I don't have any-
 thing more important to
 say, I'd better be saying
 73, eh?

De VE30AO Vance
 President OVMRC



NOTICE OF MEETING

The next regular meeting of
 the Ottawa Valley Mobile
 Radio Club will be held on
 Jan 15 at the museum of
 Science and Technology
 starting at 8 pm. the speaker
 for the evening will be Fred
 Green VE3IO, the subject will
 be "ELECTRIC CARS" Should be
 an interesting meeting. See
 you there...



MINUTES OF DECEMBER MEETING

The meeting was called to order at 20:05 by Vance VE3OAO with approximately 40 in attendance including five guests one newcomer and our intrepid foreign correspondent from North Bay Dave VE3KLX. Welcome home Dave! President Vance passed on an urgent message from the Museum security staff requesting those present to refrain from touching the antique radio and phonographs and player piano assembled at the front for a press conference on the next day.

The November meeting minutes were accepted with no changes. Vice President Bill VE3OAI announced that he still has a number of club members Directories for sale at \$2.00 each. The Treasurer Bob VE3OSN and the Technical Advisor Alan VE3LNH were both absent and no reports were available. Public Relations Director Bob VE3JDB reminded the members of the continuing need for operators for the Museum Station VE3JW. He also mentioned that there will be a special Santa Claus program for young visitors to the Museum this weekend and arrangements have been made to let them speak with Santa via 2m radio. Volunteers with hand helds are needed for Saturday and Sunday afternoons in particular.

Editor Jerry VE3CDS reminded everyone that the deadline for submissions to the Rambler is December 31. He has a backlog of articles and will use them when appropriate. Bill Wilson requested a copy of the latest Rambler as he wishes to send it to a retired member of the Royal Navy Wireless Station at Barrington Passage.

Membership Chairman Pat VE3KJQ

showed a prototype of the capacitor tester written by Russ VE3FSN in the November Rambler. He designed the circuit board using an IBM PC. It is very compact about 2" by 1.5" and is reported to work quite well. One of the former students has passed the requirements for the Advanced license and two have qualified for the Amateur license. All of which speaks well for the course and the dedication of the instructors as well as the students. An updated club membership list is available. See Pat VE3KJQ.

Bob VE3JDB announced that Jim Cummings VE3JPC had been scheduled to give a talk on Packet Radio but was called away on business. As a consequence it was decided to have a "rap-session" over coffee and allow members an opportunity to talk to those whom they may not have had a chance to chat with for awhile. Bill Wilson gave a brief description of the results of DOC tests of field strength from his 100 watt transmitter. It was surprisingly high at 10 volts per metre on the 80 metre band. The DOC mobile transmitter produced an RF voltage of 10 volts at the ac outlets in his home. The Radio Advisory Board will forward a report from its Ad Hoc Committee on EMI to the DOC in about the February 1987 time frame. The report is expected to recommend changes to the Radio Act to require manufacturers to correct susceptibility problems. The next meeting will be January 15/87. The meeting was adjourned at 20:45 on a motion by Bob VE3KJQ and Don VE3PAI.

Kris VE3OWE
Secretary



OTTAWA VALLEY MOBILE RADIO CLUB INC.

FINANCIAL STATEMENT

1 AUGUST - 31 DECEMBER 1986

A. BALANCE BROUGHT FORWARD \$1994.99

B. REVENUES

| | | |
|-----------------------|--------------|---------------|
| - Memberships | \$856.00 | |
| - Sale of Directories | 11.00 | |
| - Bank Interest | <u>21.62</u> | <u>888.62</u> |
| | | 2883.61 |

C. EXPENSES

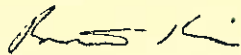
| | | |
|--------------------------------|-------------|-----------------|
| - Photocopier | \$872.09 | |
| - Rambler Postage and Supplies | 209.27 | |
| - Repeater Controller | 215.22 | |
| - Insurance | 300.00 | |
| - Phone Bill (Code Phone) | 61.64 | |
| - Post Box Rental | 25.44 | |
| - Bank Charges | 4.20 | |
| - Stationery Supplies | <u>8.40</u> | <u>-1696.26</u> |
| | | 1187.35 |

D. ON ACCOUNT FOR AMATEUR COURSE 545.50

Balance \$1732.85

BANK & CASH

| | | |
|--------------------|--------------------|------------------|
| - Savings Account | \$1507.86 | |
| - Chequing Account | 205.27 | |
| - Petty Cash | <u>19.72</u> | <u>\$1732.85</u> |


R.M. Hicks (VE3OSN)



OTTAWA VALLEY MOBILE RADIO CLUB INC.

AMATEUR RADIO COURSE 86/87

FINANCIAL STATEMENT 15 SEP - 31 DEC 86

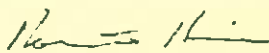
A. REVENUES

- Tuitions and Memberships \$1665.00

B. EXPENSES

| | | |
|------------------------|---------------|-----------------|
| - Advertising | 21.00 | |
| - Accommodation | 30.00 | |
| - Course Materials | 847.50 | |
| - Memberships to OVMRC | <u>221.00</u> | <u>-1119.50</u> |

Balance \$545.50


R.M. Hicks (VE3OSN)
Treasurer

MEMBERSHIP MEMO

There has'nt been much growth in membership in the last month. Membership stands at 139. There are two new amateurs in our group. Jim Johnson, Claire VE3PPT's husband, is now VE3GLJ, and Otto Ceppela has just completed his amateur qualifications, but doesn't have his call sign yet. not to be outdone, Mary VE2MEJ, Claire's sister has just completed the requirements for her advanced license. Congratulations to all of you.

We have conducted a number of Morse code tests at the course over the past few months and things have generally gone well. My biggest problem is trying to find the time to produce a new test each week.

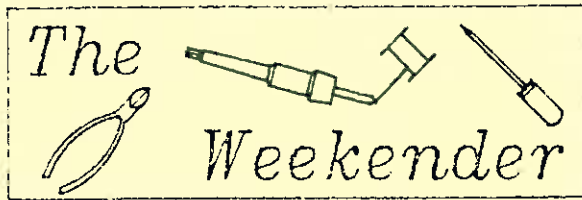
I owe a great deal of thanks to Brice VE3EDR for his help in teaching and examining people in their code sending. We are now down to the wire in the course with only about four more weeks to go. With onw student through already, we are looking forward to a very high pass ratio.

I can't help noting that the two worst storms that we have had this winter occured on meeting nights. This is no doubt appropriate for a hobby that tends to do outdoor work in the worst weather. I suppose this means that we should be doing our inside work on the nicest day of the summer. Even with the lousy weather we have had very good turnouts at the meetings.

Pat Brewer

VE3KJQ





Construction

The entire circuit can be assembled in a small aluminum case, with the components mounted on solder lug strips. The only precaution is to be careful of the 117VAC input to the transformer.

Calibration

Connect the curve tracer to the scope as shown on the schematic. Set the horizontal input selector on the scope to External Input. With nothing connected to the test terminals, you should obtain a horizontal line on the screen. Press the calibrate switch and adjust the scope vertical and horizontal gain controls and the centreing controls to obtain a straight line tilted at 45 degrees. If the calibration line tilts in the opposite direction to that shown, don't worry. This is a function of the scope and does not affect the obtained results. Also, you may find that your scope shows the line as a slight double line, this is not a fault but again a function of a slight phase shift in the scope amplifiers. The unit is now ready for use.

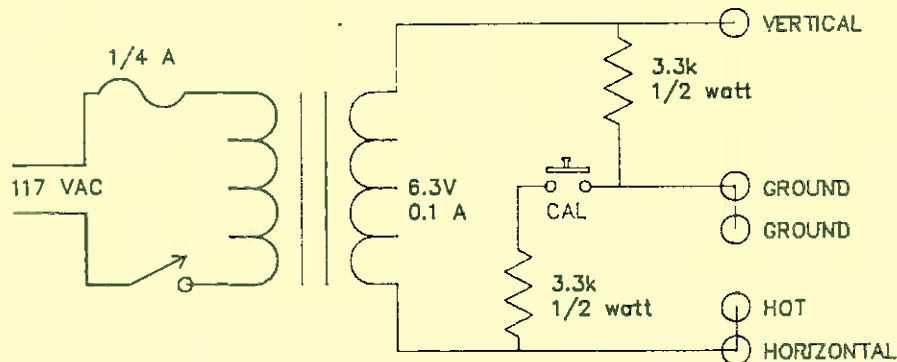
When one mentions component curve tracers, one automatically imagines huge racks of equipment costing several megabucks. The kind of facilities brought to mind can measure all manner of components, even those not yet invented, in the blink of an eye. While nice to have, this type of equipment is far from commonplace in the average ham's workshop.

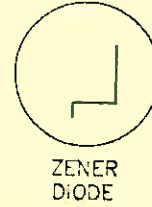
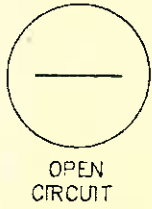
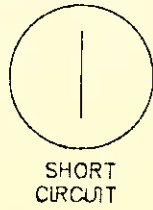
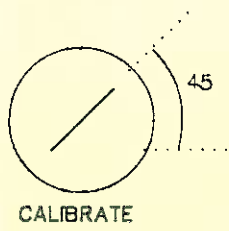
This month's project, is a slightly stripped down version of a component tester that costs less than twenty dollars, attaches to that old oscilloscope you have been threatening to throw out and will test almost all components known to man.

Components

None of the components are critical in any manner.

The transformer can be the smallest one you can find, as the circuit has a maximum short circuit current of approximately 2 mA.





Zener diode - Connect as for a standard diode. If the zener breakdown is below 10 volts, you will get the indicated pattern. If above 10 volts, the pattern will be as for a standard diode.

Operation

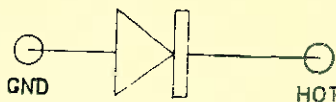
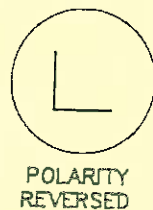
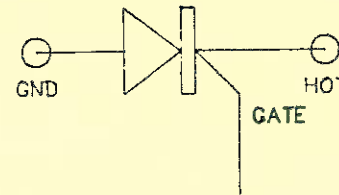
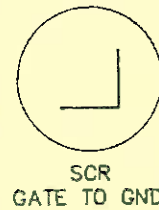
The component under test is connected between the GND and HOT terminals, with the polarity as described. The low voltage and current involved means that components may be tested in circuit. If using the tester in-circuit, DO NOT apply power to the circuit being tested.



SCR - Connect as shown, with the gate open. The first pattern should appear, a horizontal line with possibly a slightly slanted tail. If

Results

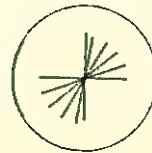
Standard Diode - Connect the diode as per the diagram. A good diode will have a sharp angle at the junction of the horizontal and vertical legs. Both legs will be nearly the same length and the legs will not be slanted from the vertices.



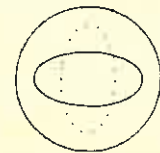
the gate is now connected to GND, the SCR will conduct and you should get the second pattern.



Transistors - Connect as shown, with the base open. The emitter-collector is a high resistance and should appear as a horizontal line. If the line is arc-shaped, the transistor has excessive leakage. Now connect the base lead to first the GND terminal and then the HOT terminal. The patterns should be as shown. If no L-pattern appears, the transistor is open. If the pattern is distorted, the transistor is leaky. The legs of the L should not deviate from the vertices, any deviation indicating leakage.



RESISTANCE



CAPACITANCE

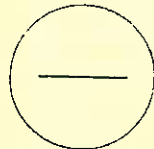
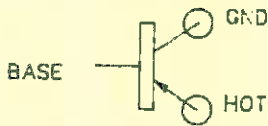
Capacitor - Connect the capacitor across the test terminals. The pattern displayed will be an ellipse. The shape of the ellipse will be dependent on the capacitor value. Any tilt in the major (long) axis of the ellipse indicates excessive leakage. The pattern should be stable, any jitter indicating a defective capacitor.



PNP: BASE TO GND
NPN: BASE TO HOT



PNP: BASE TO HOT
NPN: BASE TO GND



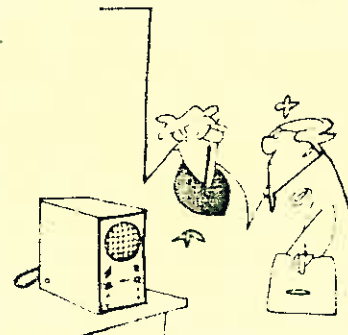
BASE
OPEN

Miscellaneous - Almost all components can be tested. If in doubt about the exact pattern, try a known good component out of circuit for comparison.

Conclusion

For the small financial outlay this project requires, you get an instrument that will pay for itself very quickly.

Resistor - Connect the resistor across the test terminals. The slope of the line is related to the resistance, vertical being nearly a short circuit and horizontal being an open. This may also be used to test potentiometers. Turning the shaft should yield a smoothly swinging line. Any jumping or fuzzy presentation indicates a worn or dirty control.



"The TV man left it here by mistake ... all I can get on it is a wiggly line."



FRIEND

LETTER TO AN OLD

(With apologies)

Dear Old Friend

Well, here it is the holiday season, when I usually take time out to write a few lines to my old pals, and remember all the good things and indulge myself to the extent of getting a little sentimental.

Its a cold and blustery evening, but here in the shack its warm and comfortable. I'm sitting here before a nice open fire with my computer, sort of half listening to the music and slowly sipping a cold, very dry martini.

I just wish you were here, old buddy. But since you aren't, the least I can do is drink to your health and happiness. So, time out, pal, while I drink a toast to you.

I had a great idea a little while ago when I was mixing another double martini out in the kitchen. I thought about all the time I would waest this evening if I went out to mix another drunk every oncet in a while so I just made me a big pitcjer and brouhgt it back with me.

You know something? They don't seem to maek gin as stroong as they used to becaues thes martonis taset weaker than the first oens. Martin6es a great drink though. Never seem to affetc me for soem reasn. I can drin them all night. I have drunkt about haelf this pitcjer and dont feel a thung.thing.

You know, paol, the greteist thingk in the world

is friebship. friendship. And believe me old budy you are the best frind anyebody ever had. You remember thoese greate radio fielddays we used to go on?? We really had fun dint we&?

I&ll never forget the tiem you put the ded skunk in my sleepjking bag. Boy how we lauhged didn't we?I nver did get the stink out of it but utwas prety funny anyway. I still laugh abuot it oncet in a whiel, but not AS MUch as I used tok.

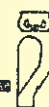
But what the heock, pal, you stilll my best olk buiddy. I%f a man can't laghu at a little joek like that what kind of freind is he)?

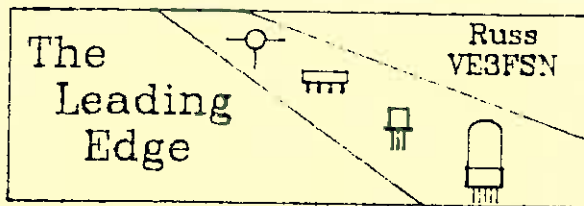
Dam picther was empty to had to go baka in kicthen and maek antoher one. WISH you wer ehere to hlep me dirnk thes emartonis becise they aer suer deciliuos even if tghey ar weakn. I*m goingk to have anthoer littel drunk to the best ole budyy anybody ever had evne if you did pull a roten tirck like putting skink in sleipping bag so i NEver got danm stunk out of the sonf a votch. Still stinsk like helk.

THAst rielly a dann lousy stpuid thinjk to do, put damjskonkk in soembodys slerping bag when IM The best feiriend you ever had. YOU Thought it was funy though didn't you ditry basrad;?

Welk, I don&t thonk is danm funnty an if you thinjk is finny yuo ar a no good sinvarotch adn you can goe to helk and stxy ther asfar ax I&m concrenefd.

I hoep you haev a losuy stirnking CHRsrmas to, yu creip.





A wristwatch that can receive and display messages has been developed by AT&T Laboratories. The circuitry is contained in two proprietary chips that combine an FM receiver and a watch in a package the size of an average sized wristwatch.

Currently installed long haul fibre optic links push data along at 565 Mbits/sec. This rate is being expanded by work going on at several laboratories. AT&T Bell Labs has reported an experimental 8 Gbit/sec fibre optic link that covers 68 km.

A new manufacturing technique, using a continuous roll-to-roll process, mass-produces amorphous silicon alloy photovoltaic solar cells. Deposited on a 1000 foot roll of 0.008 inch stainless steel substrate, the solar cells are easily and cheaply produced. While having an efficiency of only 8.4 percent, the cell's advantages, weight, portability, and adaptability outweigh the poor efficiency. Tests in the laboratory have produced tandem cells that have reached 12.5 percent and triple cell versions that have reached 13 percent efficiency.

When Voyager 2 arrived at Uranus on January 25, 1986, we all thrilled to the pictures sent back by the probe. The images we viewed had been sent over a distance of nearly 3

billion km, with a transmitter capable of a power output of only 23 watts. More fantastic than the images, however, is the space craft itself. Although designed and built in the days when hand-held calculators were first being marketed, the electronics continue to function almost flawlessly.

de Russ VE3FSN

FROM CRRL NEWS

The Toronto law firm that is working on the Jack Ravenscroft case is still waiting for the transcript of Jack's trial so that it can prepare the appeal. Meanwhile, Ralph Cameron, VE3BBM, who has been looking after the Jack Ravenscroft Susceptibility Fund, advises that the fund has been audited and a report will be available soon. Care to make a Christmas donation? The address is Box 8873, Ottawa, Ontario K1G 3J2. Once again, CRRL has written to DOC, asking for early access to the 18 and 24 MHz WARC bands, and implementation of a CRRL proposal to have a committee of amateurs screen requests for special callsign prefixes. Informal discussions with DOC officials indicate that we will have to be patient. DOC is short-staffed and preoccupied with regulations changes for certain commercial services. Amateur Radio matters have been put on the back burner. Congratulations to Larry Thivierge, VE3GT, who was recently re-elected Ontario Section Manager. Larry ran unopposed, eliminating the need for a ballotted election.



Each issue of RAMBLER contains a few hints and tips concerning the C-64 computer. Any tips that readers have found useful in their own experience, and that they would like to pass on, will be welcomed and included in future issues.

"HAPPY NEW YEAR TO YOU ALL".

1. There are some errors in the C-64 Users Manual. Appendix F (page 136 in my manual) deals with ASCII and CHR\$ codes. Codes 149 to 155 incorrectly show print graphics. They should be : (149)Brown : (150)Lt. Red : (151)Grey 1 : (152)Grey 2 : (153)Lt. Green : (154)Lt. Blue : (155)Grey 3.

Also, in the sound program on page 88, if you couldn't make Michael row his boat ashore when you tried to run the program, it may well be due to an error that crept into some printings. Change line 60 to read as follows:

60 POKEHF,H:POKELF,L:POKEW,65.

2. Amateurs who are interested can find a Commodore Users Net on Saturdays at 1500 EST on 7.228 Mhz, lower side band. All licensed Amateurs are invited to participate.

3. WARNING

The new ultrasonic humidifiers can be hazardous to any computer's health and well-being. Some, BUT NOT ALL manufacturers include a small warning that the humidifiers may deposit harmful mineral

films on disks and computer equipment. Unlike other humidifiers, which depend on evaporation and leave the minerals behind in the tank, these new ones physically spray the water - minerals and all - into the air. One solution to this problem is to use specially filtered or distilled water.

4. That amazing squirrel's nest of wire cabling, that resides at the back of many computers, can be controlled, in the interests of neatness and niceness, by any of the following:

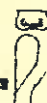
(a) Little girls use a simple device to hold their ponytails. Available in most drug stores, is an elastic band with a plastic marble on each end. It makes a ideally simple item for bundling messes of cables and cords.

(b) Radio Shack sells several varieties of inexpensive cable ties and hold-downs which also work well.

(c) Cheapest and easiest of all, however, is the inner cardboard tube from a roll of toilet tissue. Fold the cables inside for a neater appearance at the rear of the computer.

MORE NEXT MONTH

Bob - VE3KLLK.



WORD PROCESSING ???

Now that we are immersed in the business of producing the Rambler by means of computer aided typing systems, let me tell you a few of the details involved.

First of all, the old reliable stencil type copier has been retired for the time being. It has been replaced by a xerox type copier. this eliminates the messy business of Russ wrapping himself with ink soaked stencils. most of our problems are now associated with the preparation of the text for the rambler. In the beginning there was the problem of what word processing program to use. Russ had word star and the editor, Jerry had word perfect. It took some time to sort out the problem of copying the data recorded on disk in one format and trying to reproduce it on the other format. As it turns out all things are possible. Our solution was a reasonably straight forward one- use both programs.

With this approach, articles received from Russ like "The leading edge" and "The weekender" are received on disk in a 30 character format in word star. I load the word star program into my computer, tell it to print the article on the disk received from Russ and in a very few minutes we have the final copy all set for paste up in the rambler. In this issue of the Rambler it took about 15 minutes to fire up the computer and print the two articles received on disk from Russ.

For the articles received from Bob, VE3KLLK on "Computer Tips" I get it from Bob all ready to paste up. He also has a computer and has the time to print final copy for the

Rambler

Vance VE3OAO also has a computer and can provide me with copy suitable for final paste up. One of the problems with all these different computers and printers is the difference in print style. this may cause some minor comment from those who would like to see the same type face throughout the Rambler.

As we become more familiar with the two programs we are using it will become easier to manipulate the data on the disks. We have lost our share of newly typed articles in some of our experimentation. Needless to say the XYL had a few comments about the inept attempts of a radio amateur to become a computer operator. My only comment being that I thought she wanted the opportunity to do a little more typing on the computer, after all she wants to keep her speed up.

In all probability we will become reasonably proficient in the production of the Rambler in a year or two at our present rate of progress. Well, that may give you some idea of the bags of fun we are having playing with our various computer programs et al.

Hope you like what you are reading. Do not hesitate to send in hand written articles for the rambler, the xyl is pretty good at deciphering the chicken scratches of most of us. If she can't make it out she'll fake it.

We enjoy doing the Rambler and wish you all the best for the new year. May 1987 be a good year for all of us.

Jerry
VE3CDS



UNCOMFORTABLE
UNAPPRECIATED
BUT UNFAZED

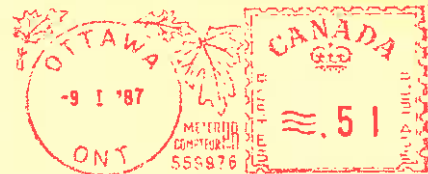
One hundred years ago, a roving telegraph operator was taken on at wu's Louisville office. At sixteen, he was already one of the best Morse operators in the business. And so he was hired in spite of the fact that he also had a rather dismal record in a score of other wu offices, and obviously was headed for no good. The youth lost no time in making himself unwelcome in Louisville as well. Years later, he recalled the disgrace.

"I went one night into the battery room to obtain some sulphuric acid. The carboy tipped overf, the acide ran out, went through the ceiling to the manager's room below,

and ate up his desk and all the carpet. The next morning I was summoned before him and told that the company wanted operators, not experimenters." There is no record that the manager ever regretted his harsh words (this was some years before the company's suggestion program was inaugurated). But the fumbling young man was, of course, Thomas A. Edison. Within eleven years his tinkering had resulted in the first of his major inventions, the quadruplex, and the greatest American inventor was well on his way.

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